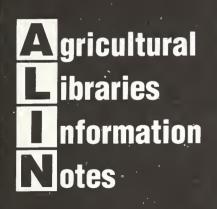
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U.S. Department of Agriculture Beltsville, MD 20705

Volume 15 Numbers 10

October 1989

ISSN: 0095-2699

Biotechnology Collection Responsibilities of the **National Libraries**

On two previous occasions, ALIN published feature articles on the joint collection development responsibilities of the National Library of Medicine (NLM) and the National Agricultural Library (NAL). These concerned subiect areas encompassed by veterinary science and human nutrition (see the February 1985 and the March 1987 issues respectively). In a similar manner, the two libraries have collaborated in an assessment of their needs and practices in subjects relating to biotechnology with the same intent of improving access to information while minimizing unnecessary duplication of effort. This project differed from the previous two in that the Library of Congress (LC) also participated by providing information concerning its collection interests in this subject.

This third cooperative collection development agreement of the National Libraries manifests their ongoing concern and continuous efforts to enhance both the services to their users and the efficiency of their organizations. Instances where it was decided to continue overlapping collection practices did not result from a failure to reach accord but resulted from a mutual recognition of the need for each of the libraries to collect selected materials concurrently in order to provide effective services in support of their missions and programs. As before, it was agreed that at the conclusion of the investigation the libraries would publish a joint statement for the benefit of their users concerning decisions that were made affecting coverage and handling of the subsumed subject areas of this topic. This statement, which follows, is also scheduled to appear in the NLM newsletter, *The National Library of Medicine*.

--Leslie A. Kulp Chief, Collection Development, NAL

Biotechnology:

Joint Collection Development Policy Statement of the National Agricultural Library, the National Library of Medicine, and the Library of Congress

Introduction

Biotechnology spans medicine, agriculture, industrial technology and commerce, and virtually all scientific disciplines, creating a broad spectrum of information needs among biotechnologists in the health professions, in agriculture, and in the sciences generally. These information seekers include

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...and more

individuals and institutions engaged in basic research, practitioners, clinicians, faculty members, students and individuals and corporations in the commercial and private sector. The three national libraries--the National Agricultural Library, the National Library of Medicine, and the Library of Congress--assume a significant role in meeting the information needs of this group through library collections by acquiring publications extensively on topics relating to biotechnology. This overlapping responsibility increases the potential for user confusion regarding the most appropriate source for particular materials, and for unnecessary and expensive duplication of effort. NAL, NLM, and LC are reviewing their collections with the ultimate goal of making access to biotechnology information easier for all interested users. As a first step, the Libraries have reviewed their collection development policies in biotechnology and have prepared this joint statement clarifying responsibilities in this area.

Purpose

The purpose of this joint statement is to define the field of biotechnology, to record the collecting policy for each Library and to provide a guide to users of biotechnology information. A further purpose is to reduce redundant collecting at the national level in this discipline.

Definition

Biotechnology is that body of knowledge which relates to the use of organisms, cells, or cell-derived constituents for the purpose of developing products which are technically, scientifically and/or clinically useful.

The literature of biotechnology is derived from diverse fields and includes basic research publications in molecular cell biology, as well as materials describing basic biological processes from several disciplines including biochemistry, genetics, immunology, virology, microbiology, and protein crystallography. An equally important segment of biotechnology literature describes applications in industrial processes, agricultural production, pollution control, waste treatment, and biomass conversion.

General Principles Governing the Collecting of Biotechnology Materials

NAL

Although the science of biotechnology is multidisciplinary, most aspects are studied at disciplinary or subdisciplinary levels. Findings of these investigations usually bear potential or direct applicational values to agriculture or related sciences. NAL collects material in biotechnology to meet the needs of the researchers and practitioners pursuing these basic sciences. NAL collects materials concerning genetic engineering, cloning technology, tissue culture, enzyme technology, the use of microorganisms for production and biomass conversion and the effect of biotechnology on the environment. Laboratory and industrial techniques, computer databases, development of algorithms related to genetic structures and the like are also of special interest.

NAL collects at the comprehensive and research level materials concerning genes, proteins, cells and tissues as they relate to laboratory and domestic animals, plants, food processing and the use of organisms in fermentation and sanitation. Studies of these topics as they relate to primates or clinical medicine are collected only when there is present a potential application to agriculturally related areas. Biotechnology materials which concern only medical or other applications which have no obvious potential value for areas of interest to agriculture are not collected. [For a definitions of collecting levels see the section "Collecting Levels at NAL and NLM" below.]

NLM

Biotechnology is designated a core subject for collecting and NLM's particular interest in the field includes materials dealing with the alteration of biologic function by changing genetic information, i.e., genetic engineering. Also of special interest are biotechnology laboratory tools and methods, which include restriction endonucleases, transfection, cloning technologies, molecular sequence and structure analysis algorithms, computer databases, and gene and protein structure, function analysis, and prediction.

For collection development purposes, materials in three areas are regarded as of central importance: [1] genes, [2] proteins, and [3] cells & tissues, when related to humans, primates, or laboratory animals and with a potential for application to human health care and disease prevention. NLM also collects, but not as broadly, other animal studies of these topics, the use of organisms in sanitary engineering and the environmental effects of biotechnology on humans or animals.

Generally excluded from the NLM collection are biotechnology materials concerned with alternative energy sources, biomass conversion for industrial production, fermentation technology, and commercial production of materials or organisms developed through biotechnology.

LC

The multidisciplinary nature of biotechnology necessitates collecting extensively in basic fields such as biochemistry, genetics, immunology, virology, and microbiology. Basic research materials for molecular cell biology, genetic engineering, applied molecular biology, enzyme technologies, monoclonal antibodies and hybridomas, recombinant DNA, plant tissue culturing, fermentation science, etc., as well as materials describing basic biological processes, are intensively collected.

Library of Congress collection guidelines insure the acquisition of library materials in such specialized areas of industrial and commercial processes as pollution control, waste treatment, biomass conversion, drug production, biorecovery of minerals, bioreactors and support systems, food science and technology, and other commercial applications.

At the present time, the Library of Congress does not have a detailed acquisition policy statement for biotechnology. However, existing LC acquisitions policy in medicine and the sciences defines a broad scope for collection development which includes biotechnology. According to the RLG Conspectus Guidelines the areas relating to biotechnology are collected by LC at the Research Level (4). The Library of Congress has deferred to the National Library of Medicine and the National Agricultural Library in the acquisition of library materials relating to clinical medicine and technical agriculture.

Collecting Levels at NAL and NLM

Together, NAL and NLM attempt to collect, retain and preserve all significant information on biotechnology as it relates to medicine and agriculture. Many aspects of the subject are collected and treated differently at each institution in accordance with the needs of its users. For the purpose of describing their collecting policies in biotechnology, NLM and NAL have outlined the field at the category and subcategory level. A list of these with the collecting levels for both Libraries appears below.

In describing the collecting levels, terminology developed by the Research Libraries Group (RLG) and later adopted by the Association for Research Libraries has been used. The RLG definitions for collecting levels used by NAL or NLM for biotechnology materials are as follows:

Basic Information Level: A collection of up-to-date general materials that serves to introduce and define a subject and to indicate the varieties of information available elsewhere. It may include dictionaries, encyclopedias, selected textbooks, surveys, histories, directories, bibliographies, handbooks and a few major periodicals, in the minimum number that will serve the purpose. A basic information collection is not sufficiently intensive to support any courses or independent study in the area involved.

Instructional Support Level: A collection that is adequate to support undergraduate and MOST graduate instruction, or sustained

BIOTECHNOLOGY COLLECTING LEVELS

The following outline for biotechnology was based on the topical breakdown used in *Biotechnology Research Abstracts* and was augmented from the subtopics used in the NAL and NLM collection development policies.

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independent study; that is, adequate to maintain knowledge of a subject required for limited or generalized purposes, of less than research intensity. It includes a wide range of basic monographs, complete collections of the works of more important writers, selections from the works of secondary writers, a selection of representative journals, and the reference tools and fundamental bibliographical apparatus pertaining to the subject.

Research Level: A collection that includes the major published source materials required for dissertations and independent research, including materials containing research reporting, new findings, scientific

experimental results and other information useful to researchers. It is intended to include all important reference works and a wide selection of specialized monographs, as well as a very extensive collection of journals and major indexing and abstracting services in the field. Older material is retained for historical research.

Comprehensive Level: A collection in which a library endeavors, so far as is reasonably possible, to include all significant works of recorded knowledge (publications, manuscripts, other forms), in all applicable languages, for a necessarily defined and limited field. This level of collecting intensity is one that maintains a "special collection"; the aim, if not the achievement, is exhaustiveness. Older material is retained for historical research.

National Collection Responsibility: RLG also developed the concept of national collection responsibility. A library that agrees to accept this responsibility for a given subject agrees to collect in the subject at the comprehensive level, process material in the subject on a priority basis, provide services nationwide for other research libraries and preserve the material dealing with the subject indefinitely. Areas of national collecting responsibility assumed by either NLM or NAL or both for all facets of biotechnology are indicated below through the use of the term "National" instead of "Comprehensive." These designations must be interpreted in light of the "General Principles" section above, i.e., assumption of "National" or "Comprehensive" responsibility for a biotechnology subtopic is limited to those aspects of the subtopic which are of particular interest to the individual Library.

Conclusion

This summary of collection development policies for biotechnology serves as a statement of national collection level responsibilities and as a guide for those who wish to utilize the resources of the Libraries for this material. The complete collection development policies of the Libraries should be consulted for additional information. The Nation-

BIOTECHNOLOGY COLLECTING LEVELS

(Continued from preceding page)

TOPIC	NLM	NAL
Animal Breeding & Aquaculture	Basic	National
Pest Control	Out of Scope	National
Soil Organisms	Out of Scope	National
Waste Treatment	Out of Scope	Research
Environment & Pollution	Research	Research
Energy, Minerals & Chemical Feedstocks	Out of Scope	National
Fermentation & Process Engineering	Out of Scope	National
Biotechnology Industry	Research	Research
Marketing	Basic	Research
Patenting (excluding patents themselves)	Basic	Research
Regulatory Issues	Research	Research

al Libraries cooperate to ensure that significant literature in biotechnology is collected, retained and preserved at the national level and to make this literature accessible to the wide variety of researchers and practitioners throughout the United States.



USAIN Update

by Sarah E. Thomas Chief, Technical Services Division

With the start of fall, the United States Agricultural Information Network (USAIN) has commenced its membership drive. Although USAIN has been meeting regularly in conjunction with conferences of the American Library Association (ALA) and the Special Libraries Association (SLA) for the past year, there has been no formal membership roster. Following discussion of the objectives and bylaws of the organization that took place at SLA in New York and at ALA in Dallas, the USAIN Executive Council met on July 23-24 at the Portland offices of Oregon State University. John Beecher, USAIN President, and Director of Libraries, North Dakota State University, chaired the meeting. In attendance were Nancy Eaton, USAIN Past President and Dean of Libraries, Iowa State University, Melvin George, USAIN Treasurer and Director of Libraries, Oregon State University, Carol Boast, USAIN Secretary and Agricultural Librarian, University of Illinois at Urbana-Champaign, and Sarah Thomas, NAL liaison to USAIN and Chief, Technical Services Division, NAL. Julia Peterson, Cargill, and Rita Fischer, Agricultural Specialist, Washington State University, joined the group on July 24.

On the agenda for the Portland meeting were such topics as revision of the bylaws, recommendation of chairpersons for USAIN standing committees and leaders for the interest groups, membership drive planning, initiatives for 1989/90, and plans for USAIN's first program meeting in 1990. The officers decided to begin membership solicitation in October, with invitations to join USAIN going to members of the Food, Agriculture, & Nutrition Division of SLA; the Science and Technology Section of the Association of College and Research Libraries of ALA, land-grant university libraries, and others who have expressed an interest in participating in the network. Membership dues for individuals will be \$15 annually and institutional memberships will be \$250. In addition to the membership drive (USAIN's current priority), other initiatives for the coming year will be fund raising, establishing the charges for the committees, continuing the work of the text-digitizing group (a sub-committee of the Telecommunications & Networking Committee), planning for a meeting to be held in January 1990 in Chicago, election of officers by the membership in spring 1990, and planning and holding the first program meeting. David Bishop, University Librarian at the University of Illinois at Urbana-Champaign, has extended an invitation to USAIN to hold its first program meeting on the University of Illinois campus. Tentative dates for the meeting are November 8-10, 1990.

The United States Agricultural Information Network, an organization devoted to promoting access to agricultural information and providing a forum for the discussion of agricultural information issues, has been in existence for a little over a year, but has already been effective in meeting its objectives. NAL was recently threatened with the loss of \$1,000,000 because of an enrolling error. Testimony by John Beecher before the House Subcommittee on Agriculture, Rural Development, and Related Agencies, supported by letters from those active in USAIN, played a significant part in NAL's recovery of those funds. NAL had the \$1,000,000, approximately 8% of its total appropriation, restored on June 30, 1989. This enabled the library to fund projects which had been on hold for eight months of its fiscal year and to retain services that otherwise were targeted for deep cuts.

USAIN will provide the opportunity for agricultural librarians and others interested in agricultural information to work together. It will support members' efforts to obtain funding for coordinated collection development, for exploration of new technology, and to cooperate in meeting document delivery, reference, and cataloging requirements. For many years, the need for increased networking among agricultural libraries and information centers has been a recurring theme in meetings held at NAL, ALA, and SLA. With the advent of USAIN, an organization to support and coordinate effective networking has been established. Those interested in becoming members of USAIN or in serving on USAIN committees are invited to contact USAIN officers or Sarah Thomas.

OCLC Users Council

Report on Its September 20-22, 1989, Meeting

by Sarah E. Thomas Chief, Technical Services Division

The OCLC Users Council met in Dublin, Ohio on September 20-22, 1989. FEDLINK Representatives to the Users Council in attendance were Gil Baldwin, Alex Campbell, Barbara Fox, Sarah Thomas, and Normand Varieur. The Users Council theme for the coming year will be "New System/ New Network = MORE (Maximize the Online Retrieval Environment)," and the focus of the September meeting was "Increasing access to information through the OCLC database: content-enriched monograph records." As in the previous year, opportunity for small group discussion occurred in the meeting of four interest groups: Communications & Access; Reference Services; Resource Sharing; and Cataloging & Database.

The meeting began formally on Wednesday evening, September 20, with a presentation by Tom Sanville, Vice-President, Marketing and Don Muccino, Vice President, Research and Development, on OCLC's new network. In September OCLC selected the SPRINT system as the basis for the network. OCLC sought in its new system compatibility with future products and long-term flexibility. Implementation planning is already underway, and OCLC intends to present the resulting implementation outline for regional network and user advisement in February 1990. Actual installation of new high-speed 9600 baud modems on multidrop lines is targeted to commence in spring 1990 and will extend over a period from 12 to 20 months.

On Thursday, September 21, Dr. K. Wayne Smith, OCLC President, updated the Users Council on events at OCLC that had transpired since the previous Users Council meeting in May 1989 and spoke at length about the role of the Users Council: in brief, it exists to elect six trustees to OCLC's Board, to ratify amendments to OCLC's Code of Regulations, and to advise OCLC. While reminding delegates that OCLC budgeted over \$110,000 to support Users Council activities annually, Dr. Smith recommended that OCLC hear more from delegates and have fewer OCLC staff presentations. He suggested that the meetings may be too frequent or too long, and that past sessions had emphasized oversight and hindsight at the expense of foresight. Ideally, the Users Council would become a national clearinghouse for new ideas and innovations. A key objective would be to turn the Users Council meetings into events to which library leaders would want to come. The Users Council needs to attract more and better candidates.

In the second part of his talk, Dr. Smith described OCLC's three major current initiatives as the new network, the new online system, and EPIC (OCLC Reference Services). Other important updates were that OCLC's revenues for FY 89 rose 11% through a combination of unexpected revenues resulting from the Forest Press/Dewey acquisition and through serious cost-cutting measures. Dr.

Smith noted that Stanford University has signed a contract with OCLC to perform retrospective conversion on approximately 800,000 records, and the University of Heidelberg will be retrospectively converting almost 900,000 records through OCLC's services.

Dr. Smith next addressed the topic that became the focal point of the meeting's discussion: the Library of Congress (LC) licensing agreement, which LC is asking all subscribers to the MARC Distribution Service to sign by October 31, 1989. The purpose of the licensing agreement, according to a July 18, 1989, letter from Henriette Avram, Assistant Librarian for Processing Services, Library of Congress, is to raise revenue "to protect the economic viability" of LC programs and to "ensure the future of the MARC Distribution Service." Under the agreement, subscribers would be required to pay fees for selective or wholesale redistribution of MARC records in addition to the subscription fee paid for each MARC Distribution Service ordered from the Library of Congress. Initial calculations by OCLC were that the new agreement would cost OCLC and its members libraries \$150,000,000, and subsequent clarifications of the agreement resulted in an estimate of over \$6,000,000. The most recent estimate places the figure at approximately \$500,000. OCLC opposes the agreement, to which Dr. Smith objects in principal. Dr. Smith stated emphatically that he believes the agreement is illegal and wrong. He considers the Library of Congress to be imposing a new tax on public information. Comparing LC's licensing fees to the admission the National Park Service charges for entrance into Yellowstone National Park, Dr. Smith declared that the difference was "at Yellowstone, you get the bears; at LC, the bears get you!" Smith deplored LC's lack of consultation with the library and information community on the proposed agreement, which he described as being out of step with the great tradition of the Library of Congress. Three attempts to meet with Dr. James Billington, Librarian of Congress, have been frustrated when the Librarian of Congress cancelled appointments, but Smith and Billington planned to meet in Washington on September 29 for further discussion.

During the meeting Dr. Smith received a communication from Dr. Billington which asserted that OCLC's reaction to the licensing agreement was based on "erroneous assumptions," and which reiterated the motivation behind the new agreement. Writing on September 19, the Librarian of Congress stated:

We view this new approach for licensing MARC records as a means by which the Library can obtain support for its cataloging distribution programs from those who derive great benefits from the Library's tremendous investment in cataloging. The Library, through its enormous investment in automation and cataloging as well as standardization for both processes, has greatly subsidized the development of bibliographic control worldwide and has generously supported libraries, vendors and other private sector organizations. However, in order to sustain these vital services for libraries, those who benefit from the value of the Library's data, particularly non-U.S. users, are being asked to return some benefit to the Library and the U.S. taxpayer. Like any organization, we too have to protect our economic and service bases, particularly as government support is not keeping pace with expenses.

The sentiment of the Users Council was that the Library of Congress had given insufficient credit for contributions to LC arising out of cooperative programs such as CONSER, NACO, and the National Coordinated Cataloging Program. Users Council delegates expressed serious doubt as to the legality of the MDS licensing agreement under Title 2 of the United States Code Section 150 (1982), "Sale of copies of card indexes and other publications," and under Title 31 Unites States Code Section 9701 "fees and charges for Government services and things of value." In a resolution passed by the Users Council on September 22, the Library of Congress was urged to withdraw the agreement and to take no further action until the Joint Committee on the Library has had an opportunity to consider holding hearings on the matter. OCLC and the library community were urged to take appropriate steps to oppose efforts by the Library of Congress to charge license fees for, and impose economic barriers to, redistribution of MDS records in the United States. Librarians were exhorted to write to their congressional representatives to express their concern over the manner in which LC has approached the licensing agreement and to convey their sense that LC's actions were in con-

flict with existing legislation.

Although discussion revolving around the LC licensing agreement occupied delegates for much of the session, the Users Council also heard presentations on content-enriched monograph records by Tom Michalak, Associate Vice President for Academic Services and Director of Libraries, Carnegie Mellon University, Martin Dillon, Director of Research, OCLC, and Mike McGill, Vice President, Planning, OCLC. In brief, they looked at the premise that additional sources of information in the bibliographic record could provide enhanced access to materials. Some of the types of additional information considered were individually authored chapters in books, papers in conference proceedings, illustrators and artists, plays in collections, tables of contents, and back-of-the-book indexes. The assumption is that enhanced records would improve retrieval in the online catalog, improve use of library collections, and permit users to make more informed judgments about their use of bibliographic items. OCLC staff described research done by OCLC that provides some preliminary guidance on the topic. Research has demonstrated the importance of table of contents information to users, but while recall or the number of hits for a search is improved, it is accomplished at the expense of precision. One must consider if the tradeoff is worth it.

On the final day of the meeting, Dr. Edward Holley, OCLC Board Chair, addressed the group on the topic "Facing OCLC's Future: Issues for Trustees, Users Council, and Members." Dr. Holley discoursed on OCLC's endeavor to support the evolution of library use and its need to define better what business it is in. He noted that the Users Council was one of many OCLC advisory groups, and that its effectiveness may have been diluted by the dispersion of the advisory responsibility. He admonished the Users Council to take control of its agenda and to improve its ability to provide advice on major issues. In discussing the OCLC Board, Dr. Holley identified three matters of primary concern: the LC licensing agreement, OCLC's international strategy, and local systems.

Following Dr. Holley's talk, the Users Council heard John Shary, Vice President, Finance and Treasurer, give OCLC's financial report in which he noted OCLC's positive financial growth. The report of the Committee to Review the Delegate Algorithm was discussed. Key considerations were the role of independents, the role of OCLC's international users, and the means of valuing contributions to the database in determining representation on the Users Council. OCLC will model changes in the Users Council based on committee recommendations before final decisions are made.

The next meeting of the OCLC Users Council will be held on February 4-6, 1990, in Dublin, Ohio.

Current Awareness Literature Service Begins Workshop Program

The Agricultural Research Service initiated the Current Awareness Literature Service (CALS) in 1972, and later in the decade NAL took responsibility for the service. Through CALS the Library provides printouts of literature citations to users based on their custom-designed subject profiles. This computer-based service searches major bibliographic databases in agriculture and related sciences at no direct cost to all USDA scientists, technicians, and administrators. During the early years, CALS staff worked with librarians and scientists in USDA to create the most efficient literature searches possible. Since the early 1980's, however, the CALS staff has not visited research centers to inform their personnel about the service or to instruct them on how to create new profiles or update existing ones. Because there are many new researchers in USDA and many existing projects have changed over the years, an ARS/NAL/CALS study team recently recommended that it was time to return to the regional centers to inform potential users about the availability of this service and to provide training sessions for

The CALS staff created a workshop to develop the skills needed for profile creation, to provide the most current information on the databases available through CALS, and to promote the most effective access to the databases. The workshop includes time to help scientists revise their current profiles or create new ones. Although the CALS staff attempts to keep existing profiles current, sometimes it has difficulty determining whether a particular profile is indeed retrieving the information desired. Going to the research centers and talking to the scientists helps improve the accuracy of the searches.

NAL chose two research centers for visits in 1989. Anita Speight, CALS Leader, visited the Eastern Regional Research Center (ERRC) in Philadelphia, Pennsylvania, on September 11, and the Northern Regional Research Center (NRRC) in Peoria, Illinois, on September 25. At each site 26 scientists and the librarian attended the sessions; 6 scientists at ERRC and 12 at NRRC met with Ms. Speight after the sessions to create new profiles or to modify existing ones.

The participants at both sites were responsive and enthusiastic about the CALS service and the chance to work on their literature searches.

The CALS staff plans to do more presentations next year. Chosen sites include the Western Regional Research Center in Berkeley, California, the Russell Research Center in Athens, Georgia, and the Southern Regional Research Center in New Orleans, Louisiana.

For further information about the CALS service, to become a user, or to update existing profiles, please contact Anita Speight at:

National Agricultural Library Current Awareness Literature Service 10301 Baltimore Boulevard, 5th Floor Beltsville, Maryland 20705

Or call: (301) 344-3859 TELEMAIL: CALS.NAL DIALCOM: AGS3059

> --Anita Speight Leader, CALS

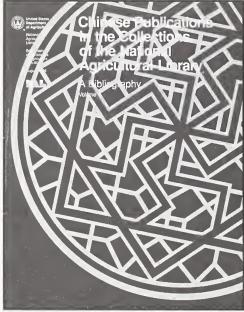


New Publications of Note

Bibliography of Chinese Publications at NAL Available

The National Agricultural Library (NAL) has just published a major research tool for the use of Chinese materials in the NAL collections, and also for identifying Chinese materials on agricultural and related subjects in other collections and libraries outside of China. The two-volume set, entitled "Chinese Publications in the Collections of the National Agricultural Library," is Number 80 in the U.S. Department of Agriculture series, Bibliographies and Literature of Agriculture (BLA), and is dated August 1989. NAL produced the bibliography through a cooperative project with Mr. Chen Qiubo, Deputy Director of the Technico-Scientific Research Institute, South China Academy of Tropical Crops, who researched and compiled it during his year as Visiting Scholar at NAL, 1987-88.

The bibliography, together with NAL's printed *Dictionary Catalog*, provides comprehensive access to Chinese publications in the NAL collections, particularly those published in Chinese or about China from the People's Republic of China, the Republic of China, Hong Kong, or Macao. The 339-page Volume I includes 3007 citations to monographic and serial titles in NAL's AGRICOLA database. AGRICOLA currently contains over 2.6 million citations to the literature of agriculture and related subjects added to the



cover design: Victor Newman
The cover of "Chinese Publications in the Collections of the National Agricultural Library."

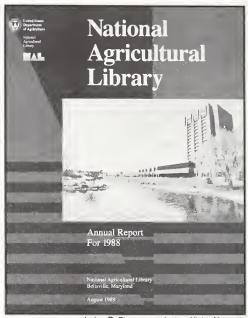
collections since the early 1970's. The bibliography is arranged in approximately 170 subject categories, with transliterated Chinese titles and English titles interfiled. There is an author index and a corporate author index, which includes both transliterated Chinese and English names. NAL call numbers are in the last line of each entry, and both the NAL and older DNAL symbols identify them. In a brief introduction Mr. Chen gives an overview of the history of Chinese printing, agriculture, and agricultural libraries and information service.

The 75-page Volume II includes 1228 additional citations to older monographic titles not previously listed in AGRICOLA, but which have been added to the database through retrospective conversion of catalog card records to machine readable form. Transliterated Chinese and English titles are interfiled in one alphabet. There is one author index including both personal and corporate authors, and both transliterated Chinese and English names. NAL call numbers are in the first line of each entry.

In addition, NAL holds more than 600 retrospective serial titles which have been omitted from this bibliography since they were not in machine readable form at the time of publication. They are listed, however, in the printed *Dictionary Catalog of The National Agricultural Library, 1862 - 1965* (New York: Rowman and Littlefield, 1965), and supplements through 1970.

In this cooperative project Charles N. Bebee, Senior Research Bibliographer at NAL, assisted Mr. Chen, developed the online search strategies, and conducted the automated literature searches. Angela Lee, Oriental Librarian in the Cataloging Branch of NAL, did the retrospective conversion of items listed in Volume II, and David Goldberg, Serials Cataloger, coordinated the conversion project.

A limited number of copies of the set are available from NAL, one set per request. Please send a self-addressed label



cover photo: D. Starr; cover design: Victor Newman The cover of "National Agricultural Library: Annual Report For 1988."

with the request to:

National Agricultural Library Special Services Branch, 14th Floor 10301 Baltimore Boulevard Beltsville, MD 20705

Additional copies may be ordered through (NTIS), PB90-106543/AS, \$45.00 paper, \$15.00 microfiche, plus \$3.00 handling charge for each order.

National Technical Information Service U.S. Department of Commerce 5285 Port Royal Road Springfield, Virginia 22161

NAL Publishes Annual Report

The National Agricultural Library (NAL) published its Annual Report For 1988 in August 1989. The 53-page report includes information about the collections, summaries of the activities and projects of the Library, descriptions of information products developed and services provided, and overviews of technology applications, communication, and networking. The report includes statistical information in graphs and tables. The appendices include lists of publications of the Library, articles published and presentations given by the staff outside NAL, gift donors, and NAL managers.

To obtain a copy, send a self addressed label with the request to:

National Agricultural Library Annual Report, Room 203 10301 Baltimore Boulevard Beltsville, MD 20705



Joint Council on Food and Agricultural Sciences Meets at NAL

On August 9-11, 1989, the Joint Council on Food and Agricultural Sciences met at the National Agricultural Library. The Library participated in the morning session on August 10, provided exhibits throughout the meeting, demonstrated new products and technology applications, and hosted several related events.

Jayne MacLean, Coordinator of the Alternative Farming Systems Information Center of NAL, participated in the session on USDA's "Low-Input Sustainable Agriculture Initiative." [See "Early Results of the LISA Program," ALIN, 15(6/7):1-10, June/July 1989, for information about this program.] Kate Hayes, Coordinator of the Technology Transfer Information Center being developed by NAL, and currently on a year's assignment to the Joint Council, made a presentation on "The NAL Role in Technology Transfer" as part of the session on USDA's initiative in this area.

Exhibits were set up by all of NAL's information centers, with particular emphasis on those of Alternative Farming Systems, Technology Transfer, and Food Irradiation. The latter was in conjunction with the session on "Improving Food Safety and Food Quality: Applying Irradiation Technology."

Joseph H. Howard, NAL Director, discussed innovations and use of new technologies in the Library's "Information Collection, Organization, and Dissemination" functions. Deborah Hanfman, Paul Hosman, Susan Whitmore, and Judith Zidar gave presentations at a session devoted to "NAL Demonstration Projects."

Patricia Endel, Executive Director of the Associates of the National Agricultural Library, spoke about progress the organization has made since it reorganized early this year, and plans for the future. On the evening of August 10th the Associates provided a forum for a "Reception for the Joint Council Honoring Dr. and Mrs. Orville G. Bentley."

At the reception Dr. Charles E. Hess, Assistant Secretary of Agriculture for Science and Education and Co-Chairman of the Joint Council, presented his predecessor in both positions, Dr. Orville G. Bentley, with an award from the U.S. Department of Agriculture (see photos and boxed text on page 11).

--Joseph N. Swab



Co-Chairmen of the Joint Council on Food and Agricultural Sciences, H. Rouse Caffey, Chancellor, Louisiana State University Agricultural Center, and Charles E. Hess, Assistant Secretary of Agriculture for Science and Education.



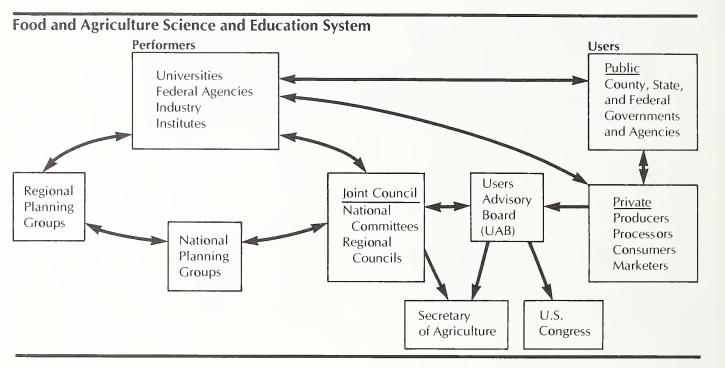
photo: J. Swab

Susan Whitmore, Head, D.C. Reference Center, NAL, and an instructor in NAL's AGRICOLA Training Program, demonstrates new technology applications, including AGRICOLA on CD-ROM, to the Joint Council on Food and Agricultural Sciences.



photo: D. Starr

All of NAL's Information Centers set up exhibits for the Joint Council's meeting at the Library, including the nascent Technology Transfer Information Center.



Purpose of the Joint Council

The Joint Council on Food and Agricultural Sciences was established in conformance with Title XIV of the Food and Agriculture Act of 1977.

The primary responsibility of the Joint Council is to facilitate more effective research, extension, and teaching programs in the food and agricultural sciences by improved planning and coordination.

Major Functions of the Joint Council

- Improve planning and coordination among the partners in the food and agriculture system.
- Develop recommendations describing current and long-range needs, priorities, and goals in the food and agricultural sciences.
- Recommend coordinated national and regional agricultural research, extension, and teaching programs.
- Analyze and evaluate the economic, environmental, and social impacts of agricultural research, extension, and teaching programs conducted in the United States.
- Report on significant agricultural achievements.

Membership

Most of the members (approximately 30) of the Joint Council are administrators representing organizations that conduct research, extension, and teaching programs in the food and agricultural sciences such as:

- Land-Grant Colleges and Universities
 - -Research, extension, teaching
- State Colleges and Universities
- Foundations
- Private Industry/Producers

- U.S. Department of Agriculture (USDA)
 - Agencies with science and education activities
- Office of Science and Technology Policy
- International Organizations
- National Agricultural Research and Extension Users Advisory Board (UAB)
 - Provides private sector recommendations on needs and budget priorities.

Food and Agricultural Sciences

Food and agricultural sciences considered by the Joint Council include these subject matter areas:

- Agriculture, including soil and water use and conservation; plant, animal, and aquaculture production, protection, and health.
- Processing, marketing, distribution, and utilization of food and agricultural products.
- Forestry, including use of forest and range lands; range management; production of forest and range products; urban forestry.
- Home economics, human nutrition, and family life.
- Rural and community development.
- International programs.

Organization

The Joint Council is cochaired by USDA's Assistant Secretary for Science and Education and a non-Federal representative.

The National Extension Committee, National Higher Education Committee, and National Agricultural Research Committee provide National perspectives to the Council.

Regional perspectives and integration of research, extension, and teaching are provided by the Regional Councils.

Meetings

The Joint Council holds four meetings per year. One meeting is held jointly with the National Agricultural Research and Extension Users Advisory Board.

Meetings are open to the public and proceedings are published.

Reports

The Joint Council initiated the following four reports to improve the overall effectiveness of the food and agricultural system.

• Needs Assessment for the Food and Agricultural

Sciences

- Five-Year Plan for the Food and Agricultural Sciences (Biennial)
- Priorities for Research, Extension, and Higher Education (Annual)
- Accomplishments for Research, Extension, and Higher Education (Annual)

The Joint Council's 12 National Priorities

The Joint Council's 12 national priorities for food, agriculture, and forestry were identified through a nation-wide selection process involving three National Committees, two Regional Councils, and literally hundreds of academic,





photos: J. Swab

(Above) Dr. Charles E. Hess, Assistant Secretary of Agriculture for Science and Education and Co-Chairman of the Joint Council, presents the U.S.Department of Agriculture's award to his predecessor in both positions, Dr. Orville G. Bentley. (Below) Dr. Bentley with the framed certificate commemorating his award, and Dr. Mark R. Bailey, Executive Secretary of the Joint Council. (Left) Dr. Bentley's award certificate.

Text of Dr. Bentley's Certificate

The Department of Agriculture of the United States of America proudly presents to Dr. Orville G. Bentley, Cochair, Joint Council on Food and Agricultural Sciences, this Testimonial of Appreciation for selfless dedication, leadership, and vision that resulted in the Joint Council achieving a position of higher respect and stature within the U.S. Department of Agriculture and the science and education community.

Your unwavering support and use of Council deliberations brought about significant improvements in the planning and coordination within the U.S. food and agricultural science and education system.

We are all grateful.

In Washington, D.C., the tenth day of August, 1989

Charles E. Hess, Assistant Secretary and Council Cochair



agricultural, professional, and government organizations, groups, and institutions. These 12 priorities represent areas of research, extension, and teaching that should receive additional emphasis as new funding is authorized or as reallocations occur within current resources:

1. Improve water quality and quantity.

2. Expand biotechnology and its applications.

3. Develop agricultural production systems compatible with the environment.

4. Nurture the Nation's talent base in the food and agricultural sciences.

5. Improve understanding of diet, human nutrition, and health relationships.

6. Enhance competitiveness of U. S. agriculture.

7. Genetically improve economically important plants.

8. Improve safety and quality of food products.

9. Investigate potential effects of global climate changes on agricultural and forest productivity.

10. Enhance control of agricultural and forest pests and diseases.

11. Develop new and expanded uses for agricultural and forest products.

12. Enhance rural economic development.

For Further Information Contact:

Executive Secretary Joint Council on Food and Agricultural Sciences U.S. Department of Agriculture Washington, DC 20250-2200



Dr. & Mrs. Orville G. Bentley



(Above L-R) Mrs. Lee; Jim Anderson, Vice Provost and Dean, College of

(Above L-R) Mrs. Lee; Jim Anderson, Vice Provost and Dean, College of Agriculture and Natural Resources, Michigan State University, and former Co-Chairman of the Joint Council; and Dr. John E. Lee, Administrator, Economic Research Service, U.S.D.A.



(Above L-R) Dr. K. Jane Coulter, Director, Higher Education Programs, U.S.D.A.; Dr. Paul Hummer, Associate Dean for Resident Instruction, Division of Agriculture, Oklahoma State University; Dr. Bentley; and Mr. Joseph H. Howard, Director, NAL. (Below L-R) Dr. R. Dean Plowman, Administrator, Agricultural Research Service; Dr. Hess; and Mr. C. Michael Hoback, Executive Assistant to the Assistant Secretary.





Lassanyi Awarded Fellowship in ComSci **Program**



Mary Lassanyi

In September it was announced that Mary Lassanyi, coordinator of NAL's Agricultural Trade and Marketing Information Center, has been awarded a year's fellowship in the Commerce Science and Technology Fellowship Program. Established in 1964, the program gives fellows policy and management experiences in the executive and legislative branches of the Federal Government. An intensive educational and orientation program is

combined with actual ten-month work assignments to foster greater awareness of the technical activities and problems existing in the Government, thereby providing motivation and encouragement for the development of cooperative endeavors and programs. The ComSci Program has been a mechanism for early identification of scientists, engineers, technologists, lawyers, economists, political scientists, and other professionals who ultimately become senior managers. The diverse character of the program enables the participants full opportunity to become involved in decisionmaking at the highest level of management. As of this writing, Ms. Lassanyi has not received her work assignment in the program.

Ms. Lassanyi joined the NAL staff in June 1980 as Head of Reference. In August 1984 she became head of the D. C. Branch library, and in April 1987, coordinator of the newly established Agricultural Trade and Marketing Information Center. Recently, she has also been working with NAL managers to establish a grants program for the Library.

Prior to coming to NAL, Ms. Lassanyi had ten years of overseas assignments including Chief Librarian, U.S. Army Headquarters, Heidelberg, Liaison between the U.S. Army and international scientific organizations, with the Air Force in Wiesbaden, and with the Army in Korea. In the U.S. she has worked primarily in science and technology libraries, including Cal Tech and the U.S. Army Science and Technol-

ogy Research Center, Frankford Arsenal, Philadelphia. Ms. Lassanyi holds the Master of Library Science and an MA and BA in International Relations from the University of Southern California in Los Angeles. She also had an undergraduate major in languages and is fluent in several.

-- Joseph N. Swab

Bebee Retires

At the end of September, Charles N. Bebee retired after more than 22 years at NAL. He joined the staff as Chief of the Pesticide Information Center (PIC) in February 1967; there he designed and supervised maintenance of the PICUPS database (Pesticide Information Center Universal Processing System) which became the prototype for NAL's CAIN (CAtaloging & INdexing) database and then AGRICOLA, and supervised editing and publishing of



Charles Bebee

the Pesticides Documentation Bulletin until the end of 1969 when it began publication by a private firm. In May 1969 he became head of the Acquisitions Division of NAL which then included Selection, Ordering, and Current Serials Records sections. From 1972 to 1976 he was head of the Reference Division, and during the first year of that time, acting head of the D. C. Branch Library.

In 1976 Mr. Bebee began working full-time with Library activities related to automation, establishing patterns for the rest of his career at NAL. He began traveling for the Library: first to the World Food Conference at Iowa State to demonstrate NAL's CAIN database, and then to many conferences and professional society meetings to show CAIN and its successor AGRICOLA. In 1978 he became an instructor in NAL's AGRICOLA Training Program, offering courses at Beltsville, Washington, D.C., and around the U.S., and handled the program alone from 1984 until 1987 when he was joined by two colleagues. In 1982 he went to Brazil to help with setting up a current awareness service for EMBRAPA (Empresa Brasileira de Pesquisa Agropecuaria).

In the mid 70's he took over responsibility for specialized searches of the AGRICOLA and other databases. These included searches for individual scientists, educators, and researchers, but also for foreign universities, governments all over the world, and international organizations. Among these were searches for India, Burma, most of the African countries, and other Third World countries; a search on the



At his retirement party, Charles Bebee opens a gift, while his daughter, Susan (left), Dr. Paul H. Terry, research chemist from ARS, and Bill Longenecker, indexer from NAL, were among the crowd wishing him well at the Bay & Surf restaurant.

effect of radiation on plants, animals, and agricultural products for the Soviet Union after the Chernobyl disaster; a similar search for U.S. agencies on the effects of volcanic explosions and dust after the Mt. St. Helens eruption; and a search on new life forms in Spirit Lake since Mt. St. Helens changed the lake and its environment. These specialized searches have included not only agricultural subjects, but also the social and life sciences and all of the hard sciences as related to agriculture.

Many of Mr. Bebee's searches have eventually become published bibliographies. He compiled about two-thirds of the titles in USDA's *Bibliographies and Literature of Agriculture* series, many in cooperation with the Environmental Protection Agency (EPA) and other agencies. He also compiled most of the titles in NAL's *Quick Bibliography* series in its early years. He did the searches for bibliographic clearances given by NAL to USDA agencies from 1977 to the present, many of which made substantial contributions to the proposed publications. From 1981 to the present Mr. Bebee has also had a project to match international Codens to NAL call numbers for CALS (NAL's Current Awareness Literature Service) and to add NAL call numbers to other databases. He has also published a number of articles in various journals.

In a cooperative project with Howard County schools, Mr. Bebee has helped students do searches for their research for county and State Science Fairs, including several winners. In 1970-74 he conducted orientation tours of NAL for scientists, and most demonstrations of AGRICOLA for on-site users and visitors from its beginnings until recent years when the current demonstration centers were set up.

Mr. Bebee's career began with student employment in 1936 in Arizona. He served in the U.S. Army in World War II being stationed in various locations in the U.S., and overseas in England, France, Belgium, and Germany. His library career began while he was a student at Arizona State College, Tempe, where he completed his B.S. in Business Ad-

ministration in 1952. Thereafter he held library positions in Chelan County Library, Wenatchee, WA; Bonneville Power Administration, Portland, OR; Oregon Historical Society, Portland; and Supervisory Records Management Officer, U.S. Army Alaska Communications System, Seattle, WA.

In 1958-62 Mr. Bebee was Assistant Librarian at the U.S. Army Transportation Intelligence Agency. There he designed and implemented an automated retrieval system for intelligence documents which was later adopted by the Defense Intelligence Agency. In 1962 he moved to U.S. Army, Fort Detrick as Assistant Librarian, was appointed Librarian in September 1963, and served in that capacity until he came to NAL. While at Fort Detrick he designed an automated cataloging and retrieval system for the Library. In 1963-64, he designed a Selective Dissemination of Information (SDI) System for the Fort. This was the only SDI system mentioned in the First Annual

Review of Information Science and Technology published in 1965. The systems Mr. Bebee developed at Fort Detrick were adopted by some other libraries: for example, Washington University at St. Louis used the cataloging system; ERDA at Oak Ridge adopted portions of the cataloging system; and the SDI system used by CALS at NAL was modelled on the one he developed at the Fort.

Mr. Bebee indicated that in retirement he will continue with some of the interests he has developed in his career, and will continue to work on the cooperative project between NAL and the EPA.

-- Joseph N. Swab

Remarks on the Occasion of William H. (Bill) Longenecker's Retirement

I have mixed emotions at this moment. I take pleasure at the opportunity to acknowledge Bill's contributions to NAL, but I must express sincere regret at the departure of a long-time colleague. Bill has had a long association with NAL, nearly twenty years since the summer of 1970, and has worked with several directors: Sherrod, Caponio, and Farley, as well as Joe Howard.

But let's start at the beginning: belying his youthful demeanor, Bill was born in Cambridge, Maryland in 1918. He has had a long-time affinity to agriculture. As a child, he spent some time on his mother's and grandmother's farms in Ohio. Later, he graduated from Ohio State with a major in bacteriology. Following graduation he worked as a chemist in Chicago, where he met and married Hèléne.



William H. (Bill) Longenecker

During WW II he was in the service at Camp Detrick in Maryland. After the war he earned his MS in biochemistry at Georgetown University evenings, while working at NIH on anti-malarial drugs. He then went to work for DuPont in Delaware, where he developed his expertise in chemical nomenclature while working as a bench chemist in agricultural chemistry. He worked for a year for the American Petroleum Institute in New York, and then went back to Fort

Detrick where he compiled bibliographies and conducted patent searches in the area of biological warfare. When Fort Detrick's mission was terminated, he came to NAL, first in Acquisitions, and then for a long time in Reference, followed by stints in the Office of the Associate Director, and finally in Indexing.

Throughout his career, Bill's professionalism was

evidenced through the honors he received, in his membership and participation in professional societies, and in his appointment and election to a variety of posts. He was on the

A group of friends and clientele join hands to wish Bill Longenecker a long and happy retirement during a party given for him by NAL Staff; (L-R) Bill Longenecker; Dr. Raymond Peterson, Department of Botany, Howard University; Dr. John Harshbarger, Director, Registry of Tumors in Lower Animals, National Museum of Natural History, Smithsonian Institution, and former President of the D.C. Chapter of Sigma Xi; Foster Morrison, self-employed mathematician formerly with the National Oceanic and Atmospheric Administration, and former President of the D.C. Chapter of Sigma Xi; and Dr. Robert M. Zacharius, research chemist, who recently retired from the Plant Stress Laboratory, Natural Resources Institute, Agricultural Research Service.

advisory board of ISI's Current Contents in Chemistry; he is a Fellow of the American Institute of Chemists; a 48-year member of the American Chemical Society; a 40-year member of the American Association for the Advancement of Science; and a long time member of ASIS. Early in his career, he was elected to Sigma Xi, the Research Society of America, when at DuPont, and has just concluded ten years as treasurer of Sigma Xi's D.C. Chapter.

Bill has published in a number of prestigious journals, including Science; Journal of Experimental Medicine; Journal of Chemical Education; Analytical Chemistry; and Chemical & Engineering News.

His extracurricular activities include membership in Toastmasters Club, and some successful activity as an investor in local real estate.

But over the years at NAL, Bill has devoted most of his time to providing information support to research chemists. The service he has rendered to his clients in ARS and elsewhere is the stuff of which legends are made. Bill didn't just answer an inquiry; he became intimately aware of the directions of the inquirer's research. As he scanned the literature, maintaining his professional knowledge, he called particularly relevant items to his client's attention, serving as a highly knowledgeable specialized current awareness system. In the course of attending professional conferences on chemistry, he might even offer suggestions and critiques useful in guiding the course of his colleague's research. And in the course of his work, Bill acquired a devoted and loyal following, reflected in the fact that he probably has the largest collection of testimonial letters of anyone who ever provided reference service in the Library. I wish I could read you excerpts from some of those letters, which offer a much better summary of his valuable contributions to chemical research and to NAL than I can do today.

> Beyond his clientele, Bill has had an impact on the structure and operations of NAL. It is only fair to say that literature specialists like Bill and several others at NAL established a pattern of service that has been brought to fruition in the creation of specialized information centers, 14 of them to date in the Library, with funding for more being sought currently. I consider this development a landmark in the evolution of NAL.

> Personally, I will remember Bill fondly for his sense of humor and his willingness to experiment with new technology. He is a true individual with his own point of view, never pressed into someone else's mold.

> When asked several times, Bill stated that he wanted no gifts. We have respected his wishes, except for something beyond price: we offer him our very affectionate farewell. So long, Bill, and God bless you!

> > --Samuel T. Waters

Decker Heads Justice Land and Natural Resources Library



Lee Decker

As of October 8, 1989, Leola Decker, "Lee," transferred from NAL to the Department of Justice to head the Land and Natural Resources Branch of the Library. Her responsibilities there include management of the branch library, supervision of a reference librarian and a library technician, and planning for expansion of staff and services.

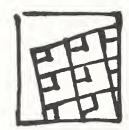
Ms. Decker joined the NAL staff in October 1985 as a reference librarian in the Farming and Forestry Reference

Branch. Simultaneously she served as associate coordinator of the Aquaculture Information Center during its first two years, and served as a 2/5 crossover to the Acquisitions Branch, where she worked with the Gift and Exchange unit, primarily taking care of the depository program. When NAL reorganized in the Spring of 1987, she became the coordinator of the New Technology Demonstration Center and

of the Software Demonstration Center. The following year she became head of the Educational Programs Unit in Special Services Branch, supervising the demonstration centers and taking on management of internal tours, external exhibits, and training programs in-house and outside of NAL.

Before coming to NAL, Ms. Decker served for 11 years at the Library of Congress, beginning for 2 years in Descriptive Cataloging, and then for 9 years as a reference librarian in the Congressional Reference Division of the Congressional Research Service. Ms. Decker earned her MLS at the University of Texas, Austin, in 1973, an MS in textiles and clothing at Purdue University in 1966, and her BS in home economics at Sam Houston State Teachers College (now University), Huntsville, Texas. Ms. Decker has also had various other library experience and taught high school in Dallas, Texas. Among her other interests are weaving, making baskets, binding books, and turning her small house on a 62-acre wooded property in Virginia into a retirement home.

-- Joseph N. Swab



Agriculture Datebook

November 9-12: Women Involved in Farm Economics. Kennewick, WA. Contact: (806) 825-3903.

November 10: National Future Farmers of America Prepared Public Speaking Contest. Kansas City, MO. Contact: (202) 447-7907.

November 10-12: American Society of Farm Managers & Rural Appraisers Annual Meeting.

Savannah, GA; Hyatt. Contact: (303) 758-3513.

November 10-14: American Agri-Women Convention. Grand Forks, ND. Contact: AAW, (805) 648-3427.

November 11-30: 25th FAO Conference. Contact: Sr. Tedesco, FAO, Via delle Terme di Carcalla, Rome, 00100 Italy.

November 12-13: The Future of Sheep and Sheep Research Seminar. Louisville, KY. Contact: (202) 447-3656.

November 12-15: American Bankers Assn. National Agricultural Bankers Annual Conference. St. Louis, MO; Marriott Pavilion. Contact: (202) 663-5186.

November 12-15: National Forest Products Association Convention. Scottsdale, AZ. Contact: NFPA, (202) 463-2700.

November 12-15: 10th Annual International Irrigation Exposition & Technical Conference. Anaheim, CA; Convention Center. Contact: The Irrigation Association, (703) 524-1200.



In a role in which many NAL users have benefited from her services, Lee Decker demonstrates new technology applications, in this case how to search NAL's AGRICOLA database on compact disk (CD-ROM).

November 13-15: U.S. Ag Export Development Council Convention. Richmond, VA. Contact: (202) 554-9538.

November 13-19. National Grange Convention. Greensboro, NC. Contact: (202) 628-3507.

November 14-15: U.S. National Plant Genetic Resources Board Meeting, Washington, D.C. Contact: Henry Shands, USDA/ARS Bldg. #5, Rm. 140, Beltsville, MD 20105 USA (301) 344-3311.

November 14-16: National Extension IPM Conference. Washington, DC; Capitol Holiday Inn. Contact: Jere A. Brittain, Clemson University, (803) 656-3410.

November 14-18: "Natural Resources for the 21st Century" Conference. Arlington, Virginia; Twin Bridges Marriott Hotel. Contact: American Forestry Association, 202-667-3300, or 800-368-5748.

November 15: Southern States Cooperative 66th Annual Membership Meeting. Lexington, KY. Contact: (202) 447-6158.

November 16: Sanitation Workshop for the Food Industry. Anaheim, CA; Inn at the Park. Contact: Kathryn Boor, (916) 752-1478.

November 16-17: National Policy Workshop. Washington, DC. Theme: "Food and Agricultural Policy Issues-Alternatives for the 1990's." Contact: Bob Spitze, U. of Illinois, Dept. of Agricultural Economics, 1301 W. Gregory Dr., Urbana, IL 61801.

November 16-19: Flaias '89 Latin American Flaias of the Poultry & Swine Industry. Anhembi, Sao Paulo, Brazil; Palacio das Convencoes. Contact: Gessulli Ediotres Ltda, Caixa Postal 8034, CEP 01051, Sao Paulo, SP, Brazil.

November 17: Canadian Agri-Marketing Association's (CAMA) Best of CAMA. London, Ontario, Canada. Contact: Gary Rose, (519) 657-1636.

November 19-21: National Association of State Universities & Land-Grant Colleges 102nd Annual Meeting. Washington, DC. Contact: (202) 778-0818.

November 20-23: 1989 Brighton Crop Protection Conference, Brighton, UK. Contact: Roger Pierce, Chiltern View Farmhouse, Kingston Street, Chinnor, Oxford OX9 4NL U.K.

November 26-28: American Meat Institute Meat Safety Conference. Cincinnati, OH; Hyatt Regency. Contact: AMI, (703) 841-2400.

November 27-30: International Association of Fairs and Expositions (IAFE) 99th Annual Convention and Trade Show. Las Vegas, NV; Bally's Grand Hotel. Contact: (417) 862-5771.

November 27-30: National Milk Producers Federation 73rd Annual Meeting & Dairy Summit. Nashville, TN; Opryland Hotel. Contact: (703) 243-6111.

November 28: Biennial Collaborator's Conference on Vegetable Research. Charleston, SC. Contact: (202) 447-3656.

November 28: University of Illinois Annual Extension Conference. Urbana, IL. Contact: (202) 447-3377.

November 28-30: New England Small Fruit and Vegetable Growers Convention and Trade Show. Sturbridge, MA; Sheraton Inn. Contact: Richard A. Ashley, (203) 486-3435.

November 28-30: 66th Annual USDA Outlook Conference. Washington, DC. Contact: Ray Bridge, (202) 447-

5447

November 30: American Foreign Service Association Conference on Foreign Affairs. Washington, DC. Contact: (202) 447-4623.

November 30-December 1: First National Conference on Food Safety. Miami Beach, FL. Contact: (202) 447-7025.

November 30-December 1: National Contract Management Association Conference. Washington, DC. Contact: (202) 447-3937.

December 2-6: 4-H Congress. Chicago, IL. Contact: (301) 961-2800.

December 3-5: 47th Professional Agricultural Workers Conference (PAWC). Tuskegee, AL; Tuskegee University. Theme: "1890-1990, A First Century of Outreach to the Rural Disadvantaged: Moving into the 21st Century." Contact: Dr. N. Baharanyi, PAWC Program Coordinator, (205) 727-8454.

December 3-6: International Symposium on Biotechnology: Science, Education and Commercialization. Gainesville, FL; University of Florida. Contact: Ms. Lenie Breeze, University of Florida, (904) 462-3904.

December 3-7: European Conference on Landscape Ecological Impact of Climate Change, Lunteren, The Netherlands. Contact: LICC Conference Secretariat, Dept. of Nature Conservation, Agricultural University of Wageningen, Ritzema Bosweg 32A, 6703 Az Wagenningen, The Netherlands.

December 4: Tuskegee University's George Washington Carver Memorial Lecture. Tuskegee, AL. Contact: (202) 447-4623. USDA Speaker: Secretary of Agriculture Clayton Yeutter (Tentative).

December 5-6: American Seed Trade Association Soybean Research Conference. Chicago, IL. Contact: ASTA, 1030 15th Street, N.W., Suite 964, Washington, DC 20005-1593, USA. (202) 223-4080.

December 5-7: 11th Biennial Range Beef Cow Symposium. Rapid City, SD; Howard Johnson Motor Lodge. Contact: Terry Goehring, South Dakota State Univ., (605) 394-2236.

December 5-7: National Farmers Organization National Convention. San Antonio, TX; Marriott Riverwalk. Contact: NFO, (515) 322-3131.

December 6-7: American Seed Trade Association Corn and Sorghum Research Conference. Chicago, IL. Contact: ASTA, 1030 15th Street, N.W., Suite 964, Washington, DC 20005-1593. (202) 223-4080.

December 6-8: National Association of Government Communicators Annual Conference. Arlington, VA; West Park Hotel. Contact: NAGC, (703) 823-4821.

December 6-8: National Fertilizer Solutions Association Convention. Las Vegas, NV. Contact: NFSA, (309) 691-2870.

December 6-9: National Agricultural Aviation Association. 23rd Annual Convention & Exposition. New Orleans, LA; Fairmont Hotel. Contact: NAAA, (202) 546-5722.

December 12: ARS Scientists Meeting/Entomological Society of America National Conference. San Antonio, TX. Contact: (202) 447-3656.

December 12-15: American Society of Agricultural Engineers International Winter Meeting. New Orleans, LA. Contact: (616) 429-0300.

5 Inducted Into Poultry **Industry Hall of Fame**

On June 2, 1989, the American Poultry Historical Society (APHS) inducted five leaders of poultry research and industry into the Poultry Industry Hall of Fame in ceremonies at the National Agricultural Library. Those honored were: Dr. Richard H. Forsythe; Mr. Robert L. Hogue; Dr. Donald McQueen Shaver; Mr. John Louis Skinner; and Mr. Leslie A. Watt.

Dr. Lawrence E. Dawson, President of the Society. presented framed certificates commemorating the occasion to the honored persons, and presented portraits of each to Joseph H. Howard, Director, NAL, for inclusion in the gallery in the Library.

Dr. Dawson also made a formal presentation of copies of the newly published American Poultry History, 1823-1973, to Dr. Charles E. Hess, Assistant Secretary of Agriculture for Science and Education, and to the Library. The 150-year history of the poultry industry in the United States and Canada was a collaborative effort of 18 scholars and an editorial board using the resources of history, libraries, and living experts, and covers all aspects of the poultry industry. Dr. Hess gave the principal address at the ceremony; his remarks appear below and on the following page.



photo: D. Star Dr. Richard H. Forsythe (L) receives award certificate from Dr. Lawrence E. Dawson, President, APHS.

Remarks of Dr. Hess

It's been a busy two weeks since I was sworn in as USDA's Assistant Secretary for Science and Education by Secretary Yeutter. I believe it's fitting that early in my tenure, I can visit with a group of individuals who represent the pioneering and progressive spirit of American and Canadian agriculture. I feel privileged to assist the American Poultry Historical Society in inducting the current honorees into its Hall of Fame.



Dr. Dawson (R) presents the portrait of Mr. Robert L. Hogue (L) for inclusion in the Gallery of the Poultry Industry Hall of Fame at NAL.



Dr. Dawson (L) congratulates Dr. Donald McQueen Shaver on his induction into the Poultry Industry Hall of Fame.

It is also fitting that the location of these ceremonies be the National Agricultural Library-an institution which takes the scientific knowledge acquired through this pioneering spirit and makes it widely available for innovation and change. As a clearinghouse for agricultural information, this library system is a valuable source of assistance to the Nation's Land-Grant Universities and to the general public.

The close ties between the poultry industry and our Nation's universities have resulted in the establishment of a poultry system which is unequalled in the world. Together, the components of this system have worked to discover, develop, transfer, and implement the latest technological advances for their mutual benefit and the benefit of society. Without such cooperation, the rapid progress of our poultry system might not have been possible.

This broad range of interest and combined sense of purpose is reflected in the diversity of the people being honored here today. We have all aspects of the poultry system represented: the industry by Donald Shaver, Robert Hogue, and Richard Forsythe; the universities and Extension by John Skinner; and the trade magazines by Leslie Watt.

Thanks to the talent, dedication, and foresight of people

like these, the poultry system in the United States and Canada has functioned over the years to provide the high quality and copious quantity of food now expected by the North American consumer - and by those abroad to whom we export.

Since the American Poultry Historical society was founded in 1952, the poultry system has seen tremendous changes take place. Just look at the switches in meat consumption patterns; the consistently low food costs for consumers; as well as the poultry production practices. When viewed from the distant past of the 1800's – as the Historical Society has done in its book on the history of American poultry—the changes are even more dramatic.

For example, Frank Reed, former Maine Extension poultry specialist, noted that prior to World War I, anyone in that state with 100 or more hens was considered to be quite heavily in "the chicken business." Average egg production in Maine was 79 eggs per hen for the year 1919. Broilers were not even heard of.

Today, 50,000 commercial laying hens is not considered a large operation, and it is not uncommon to have egg production averages of 250 eggs a hen at 60 weeks of age. And of course, we're all aware that per capita consumption of broilers plus turkey is now greater than that of beef, while pork per capita consumption was surpassed years ago. It's obvious that word is getting around that chicken and turkey are one of consumers' best values for their food dollar.

Yet, issues that threaten farmers and their operations never seem to go away—in fact, they often seem to increase in number. In the early years, Salmonella pullorum could wipe out almost an entire flock. Today, State and Federal eradication programs such as the voluntary National Poultry Improvement Plan have almost eliminated this disease as a significant health factor – and thus as a significant economic factor as well.

Today, we are addressing aspects of food safety not even considered a mere 25 years ago. For example, in the mid-80's, the Extension Service and the Food Safety Inspection Service cooperated on the Residue Avoidance Program. This educational program was intended to assure compliance with residue tolerances for all livestock and poultry sold to consumers. We are also currently dealing with the important issue of microbial contamination of our food supply, such as Salmonella enteritidis in eggs and other animal foods. In addition, the very complicated twin issues of animal



Dr. Charles E. Hess, Assistant Secretary of Agriculture for Science and Education, accepts the volume "American Poultry History, 1823-1973," published by the American Poultry Historical Society, Inc.

rights, which is based on philosophical concepts, and animal welfare, which is a based on a concern for the well-being of animals, will need to be addressed. We must understand that farmers, researchers, and others in the poultry system must take these issues seriously. Clearly, research and education are preferable to legislation of arbitrarily defined production standards.

Within any system as successful as the poultry industry, there are many individuals who have made significant contributions and who should be considered worthy of an honor such as this. However, the selection process demands only the best of the best be chosen. Today we are here to recognize this superior attainment by five of your members. By these examples of leadership, we also hope to provide incentive to others and to motivate them to even greater progress in the future for society and the poultry system.



photo: D. Starr

Mr. John Louis Skinner speaks to the American Poultry Historical Society, guests, and NAL Staff following his induction into the Hall of Fame.



Mr. Leslie A. Watt receives the applause of the audience following his induction into the Poultry Industry Hall of Fame.



Richard D. Revnnells, Program Leader, Poultry Science, USDA, Extension Service, and Secretary of the APHS, joined Vern F. Steckley, Randell K. Cole, James M. Gwin, and Louis C. Arrington in introducing the honorees.

Professor Skinner is a widely recognized Extension Educator, Exhibition Poultry Judge, and Poultry Historian. Since earning his M.S. at Texas A&M University he has been active in all phases of the poultry industry. He has served on many committees and as a resource to USDA, the Smithsonian, NAL, Time/Life Books, National Geographic, Living History Farms, American Minor Breeds Conservancy, and several publishing houses. He has an intense interest in chickens, turkeys, ducks, geese, pheasants, peafowl, and pigeons, all of which he personally reared, and has published works about them for both adult and youth (4-H)

audiences. History of the industry attracted him early, and

today he owns one of the largest privately held collections of

poultry literature and artifacts. He has served the interest of agriculture in general by focusing on such areas as waste

management, "organic" production, animal rights, right to

farm, and artificial insemination of endangered species,

before they became widely recognized concerns.

One of Dr. Forsythe's early contributions to the poultry industry was developing key factors for successful egg washing. Safety in poultry and egg products as well as their promotion has been his lifelong professional concern in both academia and industry. With others at Henningsen Foods, he developed dried egg albumen making possible the angel food cake dry mix. Research on salmonella in egg products led to pasteurization, improving product safety. He was active in the development of the Egg Products Inspection Act. He has over 40 publications dealing with poultry science and technology and has encouraged many young people to pursue careers in the poultry field. He has received recognition from many organizations including the Missouri State/National 4-H Alumni Recognition Award in 1958, the Institute of American Poultry Industries Research Award in 1958 and its Man of the Year in 1971; Fellow of Institute of Food Technologists, 1982; Arkansas Poultry Man of the Year, 1987.

Leslie A. Watt

John Louis Skinner

Robert L. Hogue

For over 54 years Leslie A. Watt has disseminated technical information on production, processing, and marketing for the poultry industry through publication of poultry periodicals. Those under his direction have been a major factor in the development of poultry technology in North America and its export worldwide. He has been instrumental in opening up an informational avenue with China through the development of *Poultry International--China Edition*. He has received many honors through his participation in business associations and civic activities.

After graduation from Purdue University, Mr. Hogue entered the commercial hatchery industry and moved up in management of a large integrated hatchery to General Manager. He assisted in the development of the Poultry and Egg National Board, and helped with the National Poultry Improvement Plan, Record or Performance programs, and International Baby Chicken Association and assisted in marketing Northern Indiana eggs in New York via pool rail cars. He was appointed to the Indiana Livestock Sanitary Board in 1945. Mr. Hogue joined the Poultry Science staff at Purdue University as Extension Poultryman in 1948. He helped develop many programs promoting Indiana as one of the Nation's leading poultry States. He won a Blue Ribbon at the Brussels World's Fair for a Chicken Barbecue film and received the Poultry Science Extension Teaching Award in 1957. Mr. Hogue assisted with international market development programs in Mexico, Spain, Brazil, Japan, and Hong Kong. He led many agriculture groups to foreign countries and assisted many national poultry groups.

Keyword Index to NAL Pubs

Donald McQueen Shaver

The Reference Branch of NAL has prepared a Keyword Index to Quick Bibliographies, Bibliographies and Literature of Agriculture, Special Reference Briefs, Agri-Topics, Pathfinders, Search Tips, Fact Sheets, and miscellaneous Information Center issuances, compiled by John B. Forbes. The 54-page index covers both publications issued through the regular publication process (e.g., QB's, BLA's, SRB's) and items xeroxed in-house for use as handouts to those who request them. This Keyword Index is such a handout, but is available upon request.

Rare is the person who combines a life-long love of chickens and outstanding knowledge of poultry breeding with supreme ability to plan, organize, and manage a business. This led Dr. Shaver to the development and distribution of truly outstanding strains of chickens for use by the industry everywhere in the world. Opportunities for an academic training did not exist but the extent of his self education and accumulation of basic knowledge was recognized by McGill University which awarded him a Doctor of Science degree, honoris causa, in 1983. He has served as an adjunct professor, on the President's Council, and on the Board of Governors at the University of Guelph. Combining outstanding executive and business ability with his desire to create the best laying chicken in the world led to Shaver Poultry Breeding Farms, Inc., that he directed for 40 years. He accomplished his objective in the mid-1960's with the Starcross 288, which has continued to show its superiority for 30 years.

The Keyword Index is also accessible through ALF, NAL's electronic bulletin board, available 24 hours per day by dialing either (301) 344-8510 or (301) 344-8511, and may be downloaded from the system.

The Keyword Index is a valuable finding tool for persons needing bibliographies on particular topics. It is revised frequently as new publications are issued, and the stock on the previous revision is exhausted. Information is also provided on how to obtain copies of items indexed.

To obtain a copy of the *Keyword Index* send a self-addressed label with the request to:

National Agricultural Library Reference Branch, Room 111 10301 Baltimore Boulevard Beltsville, MD 20705



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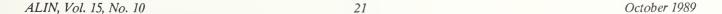
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Quarterly newsletter / Asia and Pacific Plant Protection Commission. Bangkok, Thailand: Food and Agriculture Organization of the United Nations, Regional Office for Asia and the Pacific, Quarterly, Vol. 26, no. 1 (Jan/Mar. 1983)-

SB599.F6



NAL Hosts Strawberry Exhibit

An exhibition of high quality original strawberry illustrations, publications on strawberries, and various artifacts related to strawberries opened on September 19th at the National Agricultural Library under the joint sponsorship of the North American Strawberry Growers Association (NASGA), the Agricultural Research Service (ARS), and the Library. The exhibit is located in the NAL lobby in the rare book and general exhibit areas and will remain for public viewing through November 24. NASGA and ARS celebrated the 100th anniversary of the birth of Dr. George M. Darrow, the father of strawberry research, with this exhibit and a joint meeting held at the National Agricultural Library in Beltsville, September 18-20.



photo: J. Swab

Dr. John L. Maas (L) and Dr. Gene J. Galletta with a portrait of the late Dr. George M. Darrow at the NAL Rare Book and special Strawberry Exhibits. They hold plaques commemorating their awards.



photo: J. Swab

(L-R) Dr. Miklos Faust, Head of the ARS Fruit Laboratory; Dr. Maas; Mrs. Nada Galletta; Dr. Galletta; and Dr. Essex Finney, Acting Director, Beltsville Area, ARS, at the reception in the NAL lobby.

USDA Scientists Awarded for Strawberry Research

On September 19th the North American Strawberry Growers Association (NASGA) recognized two U.S. Department of Agriculture scientists for their outstanding work with strawberries. NASGA commended USDA plant pathologist Dr. John L. Maas, plant geneticist Dr. Gene J. Galletta, and their research team for "efforts to sustain a strong and viable strawberry industry for the future." Their work continues the pioneering research begun by Dr. George M. Darrow in 1919, and carried on by ARS scientists, Drs. Don Scott, Arlen Draper, John McGrew, and Dick Converse.

"These scientists and their predecessors deserve this recognition," said Dr. Essex E. Finney at the awards ceremony. "Through genetic improvement, they've developed better, more productive strawberry varieties that resist disease." Dr. Finney, acting director of the Agricultural Research Service's Beltsville Area, said that thanks to their efforts, "there has never been a

crisis in strawberry production."

Drs. Maas and Galletta conduct their research at the ARS Fruit Lab in Beltsville, Maryland. They are currently cooperating with NASGA to test different strawberry varieties and study the genetics associated with ellagic acid production in fruit. This acid, in purified form, has been shown to decrease the risk of cancer from some carcinogenic chemicals in animals and human tissue. "We're gearing future research to improve our strawberry germplasm; and, plant productivity and health value of the fruit play important roles in these plans," Dr. Finney said. Could it be that Dr. Darrow lived to the ripe old age of 94 because of strawberries in his diet?

Dr. George M. Darrow pioneered the USDA-ARS strawberry improvement program at Glen Dale, Maryland, in 1919. The program was transferred to Beltsville in 1934 when the plant portion of the Beltsville Agricultural Research Center opened. Dr. Darrow introduced his first improved strawberry variety, Blakemore, in 1928. During his 46 years with ARS, he introduced 34 new strawberry varieties and helped introduce 28 additional varieties. He initiated the first North American program to breed for red stele root rot resistance.

Dr. Miklos Faust, the Fruit Lab's research leader and supervisor of Drs. Galletta and Maas, estimates, "We need to produce 100,000 hybrids for one new variety. Then it is distributed through the nurseries."



The late Dr. George M. Darrow



Mrs. Olivia Mageau, Horticulturist, Fruit Laboratory, ARS, and some of her collection of mugs with strawberry decorations, and other art objects in the Strawberry Exhibit at NAL.

USDA Accomplishments in Strawberry Research

- Developed varieties with resistance to red stele, a devastating soil-borne fungal disease.
- Instituted virus-indexing techniques that make plants free of viruses and therefore more productive.
- Selected plants that resist foliage diseases, so that only about 20 percent fruit loss would occur if all pesticides were banned (most other plants would be virtually wiped out).
- Greatly improved fruit firmness and quality with introduction of Earliglow.
- Combined all these characteristics in the day-neutral Tribute and Tristar cultivars, which allow spring and fall berry production on the same plants.



photo: J. Swab

Retired scientists and strawberry researchers Dr. John McGrew and Dr. Donald Scott with the exhibit of original strawberry paintings, part of a collection recently transferred from the U.S. National Arboretum to NAL.



Dr. Judith St. John, Acting Deputy Area Director for Plant Sciences Institute, and Dr. Miklos Faust, Research Leader & Supervisory Plant Physiologist, Fruit Laboratory, ARS, view the Strawberry Exhibit.



photo: J. Swab

Dr. Alan Fusonie, Head, Special Collections, NAL, coordinator of NAL's part of the Exhibit, talks with Dr. Waldemar Klassen, Plant and Natural Resource Sciences Associate Deputy Administrator, ARS (R).

United States Department of Agriculture National Agricultural Library ALIN Editor, Room 203 Beltsville, MD 20705

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(ISSN 0095-2699)

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Daniel Starr, Photographer. [(301)-344-3937]



photos: J. Swab

(Top Left) Dr. Orville G. Bentley, former Assistant Secretary of Agriculture for Science and Education, and former Cochair of the Joint Council on Food and Agricultural Sciences, and his successor in both positions, Dr. Charles E. Hess, enjoy a laugh together at the reception in honor of Dr. and Mrs. Bentley at NAL on August 10, 1989. Dr. Bentley holds a framed certificate that Dr. Hess had just presented to him. (For story and information about the Joint Council, see pages 9-12.)

(Left) Strawberries were the featured item at the reception held in honor of Dr. John L. Maas and Dr. Gene J. Galletta who had received awards for strawberry research from the North American Strawberry Growers Association. (For story, see

pages 22-23.)